



Total Solution Provider in Saw Device

SA12016AD

120.0 MHz IF SAW Filter
16.13 MHz Bandwidth
Revision 0: 09. Nov. 2009



- Electrical Characteristics
 - Package Dimensions
 - Testing Environment
 - Frequency Characteristics
-

SAWNICS Inc.

460 Cheonheung-ri, Seonggeo-eup, Cheonan-si, Chungcheongnam-do, 330-836 / Korea.
Tel: +82 41 550 9372 / Fax: +82 41 550 9399 / www.sawnics.com



□ Electrical Characteristics

Maximum Ratings

Parameters Description	Unit	Minimum	Typical	Maximum
Operating Temperature Range	°C	-5	-	80
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Load Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Package type & size	D			
Length x Width	mm ²	-	20.0 x 12.6	-
Height	mm	-	-	5.05

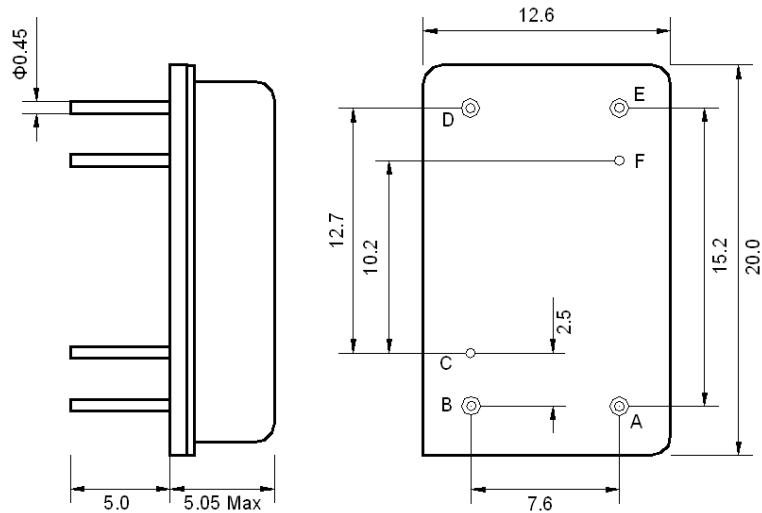
Electrical Specification

Parameters Description	Unit	Minimum	Typical	Maximum
Center Frequency (Fo)	MHz	-	120.0	-
Insertion Loss at Fo	dB	-	21.8	23.5
Group Delay Variation at Fo ± 7.50 MHz	nsec	-	49	80
Absolute Delay at Fo	usec	-	2.27	-
Passband Ripple Variation at Fo ± 7.50 MHz	dB	-	0.58	1.00
Bandwidth at -1dB	MHz	15.95	16.13	-
Bandwidth at -3dB	MHz	-	16.48	-
Bandwidth at -40dB	MHz	-	17.88	18.00
Bandwidth at -50dB	MHz	-	18.01	-
Ultimate Rejection	dB	50	55	-
Temperature Coefficient	ppm/°C	-	-72	-

Notes : (1) With Matching Network (Ref. Testing Environment Circuit as shown below).

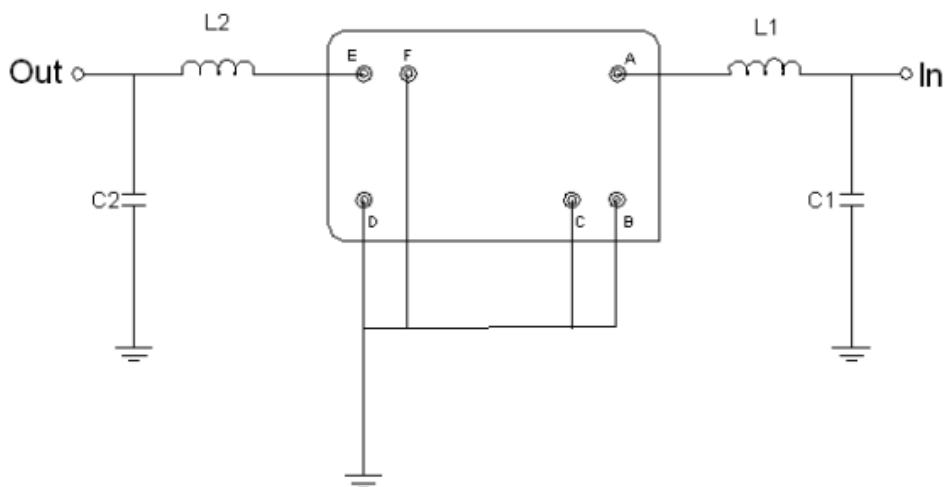
Those impedances could be modified with different impedance values and/or structures, if necessary.

Package Dimensions



Pin Description	
B, C, D, F	Ground
A	Input
E	Output

Testing Environment



Test Fixture & Values	
Input	L1 = 56 nH, C1 = 10 pF
Output	L2 = 47 nH, C2 = 22 pF
Source/Load Impedance	50 Ω

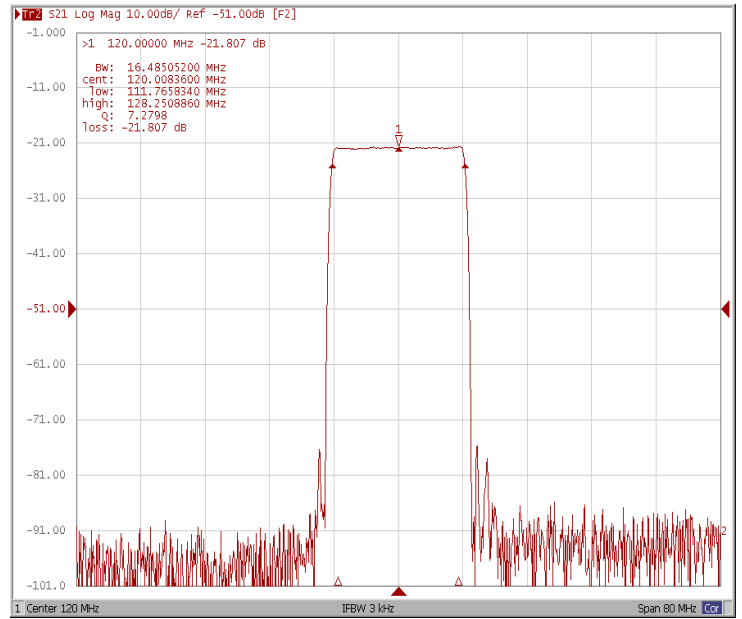
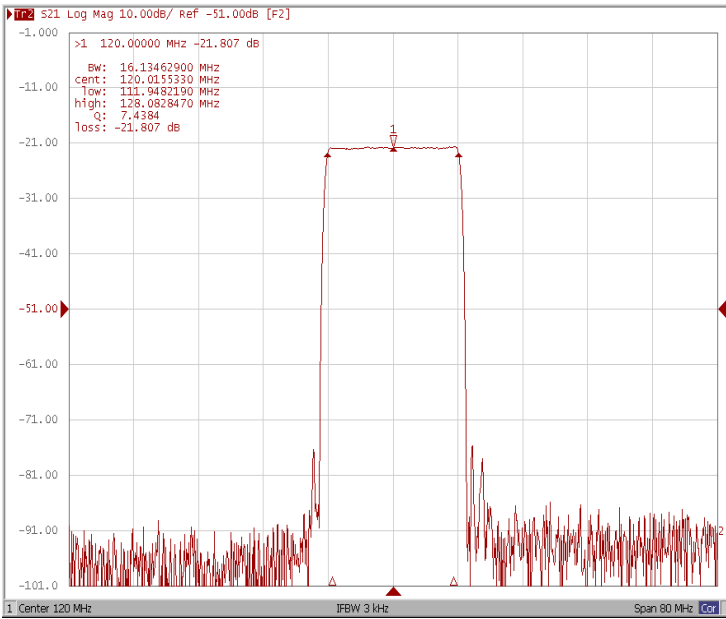


Frequency Characteristics

Frequency Response

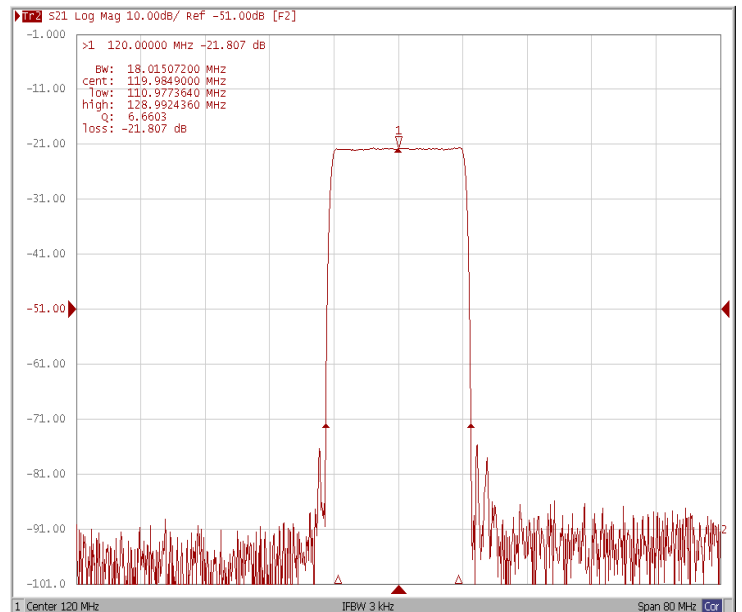
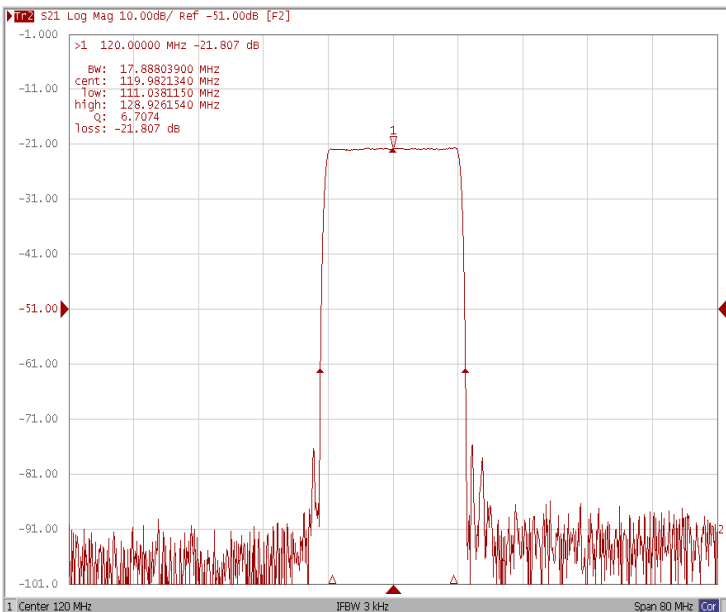
Bandwidth at -1.0 dB

Bandwidth at -3.0 dB



Bandwidth at -40.0 dB

Bandwidth at -50.0 dB

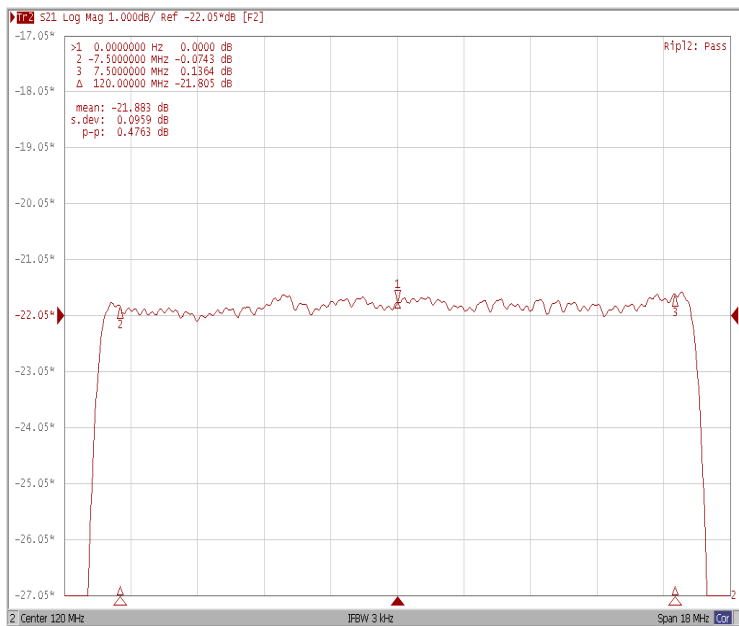




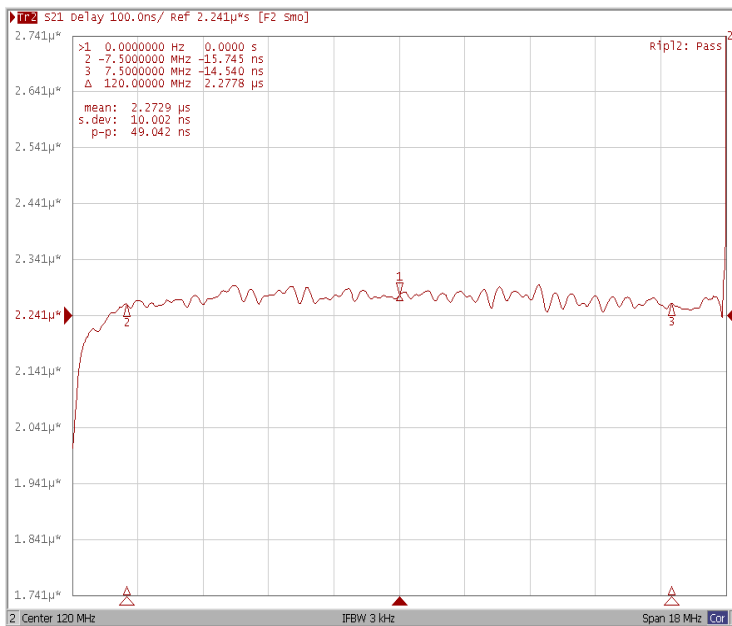
Frequency Characteristics

Frequency Response

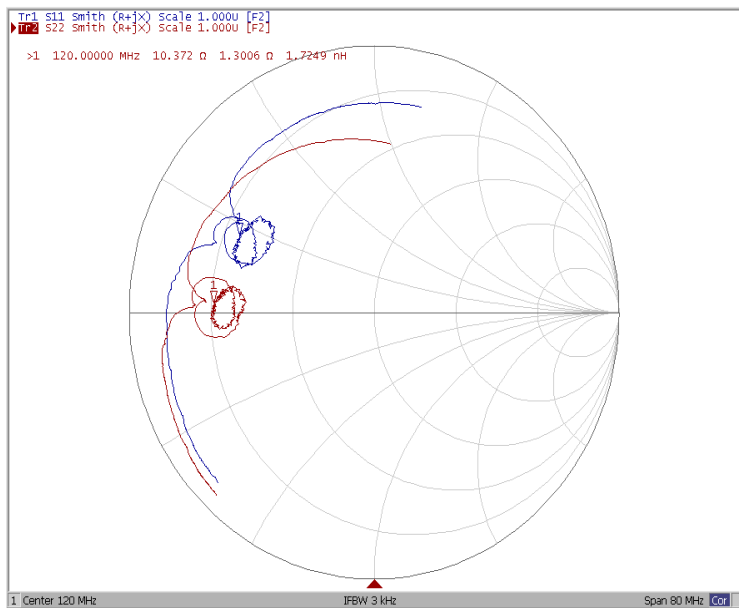
Ripple Variation Fo±7.50MHz



Group Delay Variation Fo±7.50MHz



Smith Chart



VSWR

